

BUKHSHTAB, A. A.

2

Buhštab, A. A. On an additive representation of integers.

Moskov. Gos. Ped. Inst. Uč. Zap. 71 (1953), 45-62.

(Russian)

Let  $T_{\alpha, \beta}(N)$  denote the number of representations of the positive integer  $N$  in the form  $n' + n''$ , where all prime factors of  $n'$  are greater than  $N^{1/\alpha}$  and all prime factors of  $n''$  are greater than  $N^{1/\beta}$ . In an earlier paper [C. R. (Dokl.) Acad. Sci. URSS (N.S.) 29 (1940), 544-548; MR 2, 348] the author has used an improved form of Brun's method to prove that if  $N$  is large

$$(*) \quad T_{\alpha, \beta}(N) \geq 0.4N(\ln N)^{-3}$$

(and thus that  $N$  is expressible as a sum of two positive integers each containing at most four prime factors). Here he uses results from another paper [Mat. Sb. N.S. 28(70) (1951), 165-184; MR 13, 626] to prove that whenever  $p \geq 3$  we have

$$T_{\alpha, \beta}(N) = CN(\ln N)^{-2} \psi(\alpha, \beta; N) \prod_{p|N} \{1 + 1/(p-2)\} + O(N(\ln N)^{-3}),$$

where  $C$  is a positive absolute constant,  $p$  runs over the odd primes, and

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BUHSTAB, A. A.

$$|\psi(\alpha, \beta; N)/(\alpha\beta) - 1| < \exp \{-\alpha(\ln \alpha + \ln \ln \alpha - 1 - \ln 2 + \gamma \ln \ln \alpha / \ln \alpha)\},$$

$\gamma$  being an absolute constant which is unfortunately not calculated. (Even if  $\gamma$  were calculated explicitly, the value obtained would probably not be large enough to establish a result analogous to (\*) for  $T_{4,4}(N)$ .) P. T. Bateman.

2/2

Sm

BUKHSHTAB, A.A., prof.; DITSMAN, A.P., dots.; NECHAYEV, V.I., dots.;  
KHAYYS, I.G., tekhn. red.

[Programs of pedagogical institutes; advanced algebra] Programmy  
pedagogicheskikh institutov; vysshiaia algebra. Moskva, Gos. uchebno-  
pedagog. izd-vo M-va prosv. RSFSR, 1957. 6 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i  
srednikh pedagogicheskikh uchebnykh zavedeniy.  
(Algebra--Study and teaching)

BUKHSHTAB, A.A.

BUKHSHTAB, A.A., red.; MAKSYEV, A.V., tekhn.red.

[Programs of pedagogical institutes; theory of numbers, elementary arithmetic] Programmy pedagogicheskikh institutov; teoriia chisel, osnovniiia arifmetiki. [Moskva] Uchpedgiz, 1957. 9 p. (MIRA 11:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i srednikh pedagogicheskikh uchebnykh zavedenii.  
(Numbers, Theory of)  
(Arithmetic--Study and teaching)

~~BUKHSTEINER, A.A., prof.; VILEN'KIN, N.Ya., prof.; PILENKO, N.D., dots;~~  
~~NOVIKOV, P.S., prof.; PEREPELKIN, D.I., prof.; LEVIN, V.I., red.;~~  
~~KREYS, I.G., tekhn.red.~~

[Programs of pedagogical institutes; analytic geometry, mathematical analysis, methods of mathematical physics] Programmy pedagogicheskikh institutov: analiticheskaya geometriya, matematicheskii analiz, metody matematicheskoi fiziki. [Moskva] Uchpedgiz, 1957. 12 p. (MIRA 11:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i srednikh pedagogicheskikh uchebnykh zavedenii.  
(Geometry, Analytic--Study and teaching)  
(Mathematics--Study and teaching)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHSHTAB, A.A.

Asymptotic evaluation of certain numerical functions connected with  
the number of divisors. Uch. zap MGPI 108:45-53 '57.

(MIRA 11:12)

(Numerical functions)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

BUKHSHTAB, Aleksandr Adol'fovich; KAPUSTINA, V.S., red.; KARPOVA, T.V.,  
tekhn.red.

[Number theory] Teoriia chisel. Moskva, Gos.uchebno-pedagog.  
izd-vo M-va prosv.RSFSR, 1960. 374 p.

(MIRA 14:2)

(Numbers, Theory of)

MIKHELOVICH, Sheftel' Khenekhovich; ANDRONOV, I.K., prof., retsenzent;  
BUKHSETAU A.A., prof., retsenzent; NECHAYEV, V.I., dots., retsenzent;  
TAL'SKIY, D.A., red.; GOROKHOVA, S.S., tekhn.red.  
[Theory of numbers] Teoriia chisel. Moskva, Gos.izd-vo  
"Vysshiaia shkola," 1962. 259 p. (MIRA 16:7)  
(Numbers, Theory of)

BUKHSHTAB, A.A.

New results in studying the Holbach-Euler problem and the problem  
of twin primes. Dokl. AN SSSR 162 no. 4:735-738 Je '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V.I.  
Lenina. Submitted December 8, 1964.

BUKHSHTAB, A.I.

~~Solar energy.~~ (From: "Electrical Supervisor" no.3 '56).  
Prom.energ. 11 no.7:32 J1 '56.

(MLRA 9:10)

(Solar energy)

BUKHSHTAB, A.I.

TYUTUNNIKOV, B.N., doktor tekhnicheskikh nauk, professor; BUKHSHTAB, A.I.,  
inzhener.

Using synthetic fatty acids in the production of siccatives. Masl.  
-shir.prom. 23 no.1:21-22 '57. (MIRA 10:1)

1. Khar'kovskiy politekhnicheskiy institut.  
(Acids, Fatty) (Driers)

**BUKHSHEB, Ye.A.**

Remote sequels of epidemic hepatitis in children. *Pediatriia, Moskva*  
No.3:29-32 May-June 51. (CIML 21:4)

1. Candidate Medical Sciences. 2. Of the Hospital imeni Filatov (Head  
Physician—Honored Physician RSFSR V.V. Kvintitskaya).

BUKHSHTAB, Ye. A.

IVANOVA, V.V.; LUNEV, D.K.; BUKHSHTAB, Ye.A.

Certain problems of the clinical aspect of acute poliomyelitis. Zhur.  
nerv. i psikh. 53 no.6:441-445 Je '53. (MLRA 6:6)

1. Institut nevrologii Akademii meditsinskikh nauk SSSR. (Poliomyelitis)

BUKHSHTAB, Ye.A.; DUBINSKAYA, I.D.

Mosinophilias in children. Vop. okh. mat. i det. 4 no. 5:85-88 S-0 '59.  
(MIRA 13:1)

1. Iz kafedry propedevtiki detskih bolezney (zav. - prof. V.A. Vlasov) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova na baze detskoy bol'nitsy imeni N.F. Filatova (glavnnyy vrach N.N. Kalugina).

(MOSINOPHILES)

BUKHSHTAB, Ye.A., kand.med.nauk; SEMENOV, B.N.

Problem of Letterer-Siwr disease. Pediatrilia 37 no.12:24-28  
D '59. (MIRA 13:5)

1. Iz kafedry propedevtiki detskih bolezney (zav. - prof. V.A. Vlasov) II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova na base detskoy bol'ницы imeni N.Yu. Filatova (glavnnyy vrach M.N. Kalugina).  
(LIPOIDOSIS)

BUKHSHTAB, Z. I.

TYUTYUMNIKOV, B. N., BUKHSHTAB, Z. I., CHERKASOV, P. K.

Lacquer and Lacquering

Experience in applying bituminous lacquer trade mark IUZHNII., Stroi. prom., No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1952 *1644/1653*, Uncl.

BUKISHTAB, Z..L.

Cand Tech Sci, "Deriving Film-Forming Substances from Bituminous Materials."  
Cand Tech Sci, Khar'kov Polytechnic Inst, Khar'kov, 1954. (RZhKhim, No 5, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (15)

Use of synthetic fatty acids for the manufacture of driers.  
S. N. Tyntyukov and Z. I. Butkhatib (Polytechn.  
Inst., Kharkov). Maschinenbau, No. 23, No. 1,  
1959 (1957). — Discussion of possible technological processes  
for the manuf. of driers from C<sub>1</sub> to C<sub>11</sub> synthetic fatty acids  
obtained from oxidized paraffin. V. N. Krivotsky.

PM  
MT

BUKHSHTAH, Z. I.

Drying oils. B. N. Totomikov and Z. I. Bukhshah  
U.S.S.R. 106,509, May 25, 1957. Normal, said, fatty  
acids with 7-10 C atoms are combined with 20-30% said  
fatty acids having branched C chains.

M. Hosh

3  
4-4j

PM

18.8310

S/081/61/000/001/006/017  
A005/A105

Translation from: Referativnyy zhurnal, Khimiya, 1961, No. 1, p. 295, # 11172

AUTHORS: Tyutyunnikov, B.N., Bukhshtab, Z.I.

TITLE: On the Problem of the Causes of "Emersion" of Aluminum Bronze

PERIODICAL: "Tr. Khar'kovsk. politekhn. in-ta", 1959, Vol. 26, pp. 155 - 159

TEXT: To enlarge the durability of anticorrosion coatings consisting of organic substances, a special polished powder (Al-bronze) is being applied, which prevents from the permeation of light into the depth of the layer protecting from premature aging of the film-building substance. The decrease in the wettability of the Al-bronze-lamellae by drying oil, varnishes, and other oils in consequence of that a mixture of stearic acid and Al-stearate occurs in them, is caused not by this mixture proper but by a layer of  $O_2$ , occurring on it. The growth of the Al-bronze may be excluded, if polish it in the presence of a mixture of stearic acid and Al-stearate. It is established that the formation of the lustrous coating

VA

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S/081/61/000/001/006/017  
A005/A105

On the Problem of the Causes of "Emersion" of Aluminum Bronze

film on the surface of a suspension of Al-bronze in varnishes - drying oil is caused by froth flotation of its lamellae owing to the air contained in the bronze (among the particles). ✓ A

N. Popova

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

BUKREHTAB, Z.I.; DISTANOVA, L.Ya., inzh.

Determining the carbonyl numbers of products from paraffin oxidation. Masl.-zhir. prom. 27 no.11:29-31 N '61. (MIRA 15:1)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.  
(Paraffin wax)  
(Oxidation) (Carbonyl group)

S/063/62/000/012/001/005  
E075/E135

AUTHOR: Bukhshtab, Z. I.

TITLE: A study of the effect of ultrasound on the oxidation rate of synthin

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.12, 1962,  
8-11

TEXT: The author studied the effect of ultrasound 300, 600, 750 and 1000 kc on the oxidation of Fisher-Tropsch wax boiling at 255-320 °C to produce alcohols by the method of Professor A.Ya. Bashkirov. The oxidation was conducted in a stainless steel cell at 170 °C by passing 700 litre/h air per one kg of the mixture containing 4% boric acid. The 300 kc vibrations increased markedly the oxidation rate, the hydroxyl number of about 60 being reached in one hour, instead of two hours without the vibration. As the vibration frequency increased, the effect on the reaction rate decreased and at 1000 kc the reaction rate was slower than that without ultrasound. By means of another oscillator the effect of 20 kc oscillations was studied; these had no effect on

Card 1/2

'A study of the effect of ultrasound.. S/065/62/000/012/001/005  
E075/E135

the reaction. It is recommended that ultrasonic generators of a higher power and a wider range of frequencies than those used in the experiments should be used to activate the oxidation. There are 1 figure and 2 tables.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut  
(Khar'kov Polytechnical Institute)

Card 2/2

TYUTYUNNIKOV, B.N.; BUKHSHTAB, Z.I.

Oxidation of paraffin hydrocarbons in the presence of acid catalysts.  
Izv.vys.ucheb.zav.; pishch.tekh. no.5:59-63 '63. (MIRA 16:12)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina,  
kafedra tekhnologii zhirov.

TYUTYUNNIKOV, B.N.; BUKHSHTAB, Z.I.; GASYUK, L.V.

Obtaining naphthenic alcohols by the oxidation of higher naphthenes.  
Khim. i tekhn. topl. i masel 9 no.12:20-24 D '64.

1. Khar'kovskiy politekhnicheskiy institut.

(MIRA 18:2)

ACC NR: AP7005619

(A, N)

SOURCE CODE: UR/0413/67/000/002/0059/0060

INVENTOR: Bukhshtaber, Ye. Ya.

ORG: None

TITLE: A converter for changing single-phase voltage to three-phase. Class 21, No. 190470 [announced by the "Tyazhpromelektroprojekt" State Design and Planning Institute (Gosudarstvennyy proyektnyy institut "Tyazhpromelektroprojekt")]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 59-60

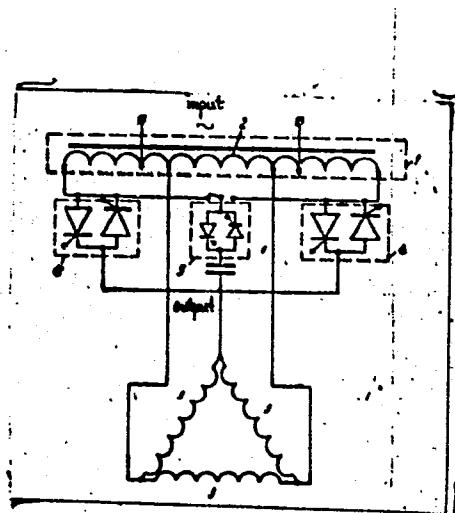
TOPIC TAGS: nonrotary electric power converter, electric transformer, alternating voltage

ABSTRACT: This Author's Certificate introduces a converter for changing single-phase voltage to three-phase. The installation contains a transformer with tapped winding as well as noncontact switches. Voltage symmetry is achieved by making the secondary of the transformer in three sections with one of the load phases connected to the center section. The neutral point between the other two phases is connected through two power switches to the initial and terminal ends of the transformer secondary and to a commutation switch.

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UDC: 621.314.252

ACC NR: AP7005619



1--transformer with tapped winding; 2--center section of the transformer; 3--load phases; 4--power switches; 5--commutation switch

SUB CODE: 09 / SUBM DATE: 12Jun65

Card 2/2

BUKHSHTEYN, I.

NEVIDITSIN, N.; BUKHSHTEYN, I.; BAYEVICH, A.; TOLCHINSKIY, Ya.;  
GLUGAN, A.

Regulate wages in the automotive transport industry. Avt.  
transp. 34 no.10:3-5 0 '56. (MLRA 9:12)

1. Kiyevskiy avtotrest (for Neviditsin) 2. Nachal'nik planovogo  
otdela Dneprosvershinskoy Avtotransportnoy kontory Ministerstva  
stroitel'stva predpriyatiy metallurgicheskoy i khimicheskoy  
promyshlennosti (for Buhshteyn) 3. Starshiy ekonomist  
avtotransportnoy kontory "Grozneftezavodstroy." (for Bayevich)  
4. Dnepropetrovskiy avtotrest Ministerstva stroitel'stva  
predpriyatiy metallurgicheskoy i khimicheskoy promyshlennosti  
(for Tolchinskiy and Glugan).

(Wages) (Transportation, Automotive)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHSHTEYN, I.

Improve the quality of cost estimation. Avt.transp. 4 no.8:48 Ag '62.  
(MIRA 16:4)  
(Transportation, Automotive—Cost of operation)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

BUKHSTEYN, V.M.  
CH

The solubility polymorphs of sodium carbonate in the brine  
of the Minusinsk Lakes. V. M. Bakhshteyn and A. R.  
Zakhar. *Trudy Vsesoyuz. Nauk.-Issledovatel. Inst. Gafan-*  
*gi No. 21, 225-42 (1949).*—The brines of two lakes of the  
Altai region and similar synthetic solns. contg. 8-11%  
Na<sub>2</sub>CO<sub>3</sub>, 1-3% NaHCO<sub>3</sub>, 3-7% NaCl, and 1-3% Na<sub>2</sub>SO<sub>4</sub>  
were cooled, and the equil. compn. of the crystal phase  
and the liquid were detd. First, Na<sub>2</sub>CO<sub>3</sub>.10H<sub>2</sub>O crystd.  
out. It contained (in solid soln.) mirabilite, the amt.  
of which was greater, the lower the concn. of the initial  
soln. On further cooling the amt. of mirabilite increased,  
and at even lower temp. ice formed. J. J. Bikerman

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

EUKHSTEYN, V. M., GARKAVI, M. Ya., and GARKAVI, N. S.

Metamorphization of Kara-Bogaz Bay brines. Zhur. prikl. khim., 25, No. 5, 1952.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

21779-66 EWT(m)/EWP(i) RM  
ACC NR: AP6002548 (A)

SOURCE CODE: UR/0286/65/000/023/0047/0047

AUTHORS: Trofimov, F. A.; Bukhtarova, Z. V.; Kharitonov, V. M.; Dubyin, A. A.; Kudryashov, S. A. 35

ORG: none

TITLE: A method for purifying polycaproamide, Class 39, No. 176680 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 47

TOPIC TAGS: oligomer, polymer, vacuum refining, polyamide compound

ABSTRACT: This Author Certificate presents a method for purifying polycaproamide from low molecular impurities by means of a vacuum distillation. To improve the technological process, the cyclic oligomers of  $\epsilon$ -aminocaproic acid, which are present in the impurities, are decomposed catalytically at a temperature of 250—260°C.

SUB CODE: 11, 07/SUBM DATE: 14Jul64

Card 1/1 0-L

UDC: 678.675'126.025.4

RADYL'KES, I.S., prof., doktor tekhn.nauk; BUKHTER, Ye.Z., inzh.; VEYNBERG, B.S., kand.tekhn.nauk; VOL'SKAYA, L.S., inzh.; GERSH, S.Ya., prof., doktor tekhn.nauk [deceased]; GUDEVICH, Ye.S., inzh.; DANILOVA, G.N., kand.tekhn.nauk; YEFIMOVA, Ye.V., inzh.; IOFFE, D.M., kand.tekhn.nauk; KAM, K.D., kand.tekhn.nauk; LAVROVA, V.V., inzh.; MEDOVAR, L.Ye., inzh.; ROZENFEL'D, L.M., prof., doktor tekhn. nauk; TKACHEV, A.G., prof., doktor tekhn.nauk; TSYRLIN, B.L.; SHUMELISHSKIY, M.G., inzh.; SHCHERBAKOV, V.S., inzh.; YAKOBSON, V.B., kand.tekhn.nauk; GOGOLIN, A.A., retsenzent; GUHMAN, A.A., retsenzent; KARPOV, A.V., retsenzent; KURYLEV, Ye.S., retsenzent; LIVSHITS, A.B., retsenzent; CHISTYAKOV, F.M., retsenzent; SHLYMKIN, A.Ye., retsenzent; SHAMSHEDINOV, G.A., retsenzent; PAVLOV, R.V., spetsred.; KOBULASHVILI, Sh.N., glavnnyy red.; RIUTOV, D.G., zam.glavnogo red.; GOLOVKIN, N.A., red.; CHIZHOV, G.B., red.; NAZAROV, B.A., glavnnyy red.izd-va; NIKOLAEVA, N.G., red.; BYDINOVA, S.G., mladshiy red.; MEDRISH, D.M., tekhn.red.

[Refrigeration engineering; encyclopedic reference book in three volumes] Kholodil'nais tekhnika; entsiklopedicheskii spravochnik v trekh knigakh. Glav.red. Sh.N.Kobulashvili i dr. Leningrad, Gostorgizdat. Vol.1. [Techniques of the production of artificial cold] Tekhnika proizvodstva iskusstvennogo kholoda. 1960. 544 p.  
(MIRA 13:12)

(Refrigeration and refrigerating machinery)

ALEKSANDROV, S.V.---(continued) Card 2.

1. Vsesoyuznyy institut rasteniyevodstva (for Sachkarev, Lizgunova, Brezhnev, Gazenbush, Meshcherov, Filov, Tkachenko, Kazakova, Krasochkin, Levandovskaya, Shebalina, Syskova, Makasheva, Ivanov, Martynov, Girenko, Ivanova, Shilova). 2. Gribovskaya ovoshchnaya selektsionnaya optytnaya stantsiya; chleny-korrespondenty Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Alpat'yev, Solov'yeva). 3. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Brezhnev).

(Vegetables--Varieties)

MINEYEV, P.A., inzh.; GUREVICH, Ye.S., inzh.; SHINKA, V.Ya., inzh.;  
BUKHTER, Ye.Z., inzh.; SHCHERBAKOV, V.S., inzh.; IL'INA,  
N.I., inzh.; GLUKHOV, V.V., inzh.; GOGOLINA, T.V., inzh.;  
KROTKOV, V.N., inzh.; STASHIN, Ye.A., inzh.; KUSHNER, A.P.,  
Inzh.; YERMAKOVA, P.L., inzh.; PAVLOV, R.V., inzh., red.;  
KASPEROVICH, N.S., ~~tekhn. red-va~~; UVAROVA, A., tekhn. red.

[Catalog of refrigeration equipment] Katalog kholodil'nogo  
oborudovaniia. Moskva, Mashgiz, 1963. 186 p.

(MIRA 16:7)

1. Russia (1923- U.S.S.R.) TSentral'noye konstruktorskoye  
byuro kholodil'nogo mashinostroyeniya. 2. TSentral'noye konstruk-  
torskoye byuro kholodil'nogo mashinostroyeniya (for all except  
Kasperovich, Uvarova).

(Refrigeration and refrigerating machinery--Catalogs)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

~~BUKHTALOVSKY, G.~~

MASLENIKOV, A. (Ivanovo); MALYSHENOV, A. (Leningrad); ~~BUKHTALOVSKY, G.~~  
(Krasnodar); KOVALENKO, V. (Vladivostok); NENASHEV, S. (Novosibirsk).

Weekdays of volunteer brigades. Posh. delo 3 no.7:13 J1 '57.  
(Fire prevention) (MLRA 10:8)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

BUKHTANOV, I.N.; TSAR'KOV, G.A.; PEYSAKHOV, V.K.; KATSER, B.M.;  
VAKHRANEVA, T.N.; TRST'YACHENKO, S.Ya.

Rubber coatings and belts for draw boxes on spinning machines.  
Tekst.prom. 19 no.2:20-24 F '59. (MIRA 12:5)  
(Spinning machinery) (Rubber coatings)

S/194/62/000/001/026/066  
D201/D305

AUTHORS: Bukhtayeva, L. P. and Yurevich, Ye. I.

TITLE: The influence of the generator transient on the dynamics of absolute angle turbine control

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 1, 1962, abstract 1-2-99 1 (Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t, 1960, no. 12, 79-85)

TEXT: The results are given of investigations into the dynamics of angle control of a generating aggregate, connecting to infinite power bus-bars. The effect of transients in the excitation system of the generator was taken into account. The analysis was made in linear approximation, using mathematical simulation. The following problems are analyzed: The effect on the angle turbine control dynamics of the excitation system of the generator; the angle turbine control with transfer of  $\dot{\Psi}^I$  and  $\ddot{\Psi}^{II}$  angle derivative corrections from the turbine to the excitation of the generator; the turbine

Card 1/2

S/194/62/000/001/026/066  
D201/D305

The influence of ...

angle control with  $\Phi^I$  and  $\Phi^{II}$  corrections simultaneously to both the excitation and the turbine. The analysis of the investigation and recommendations are given. 7 figures. 1 reference. [Abstract note: Complete translation.]

Card 2/2

BUKHTBINDER, M.A.; SLONIMSKAYA, N.I.

Two cases of anomaly of development of the thoracic portion  
of the spine. Vest. rent. i rad. 35 no. 6:76 N-D '60.

(MIR 14:2)

1. Iz detskikh leningradskikh poliklinik No. 1 i' 2.  
(SPINE—ADNORMITIES AND DEFORMITIES)

*[A]* Heterocyclic compounds. XI. K. S. Synthesis: Indigoic  
Substance. 11. Letters of 1-carbethoxymethyl-2,5-dimethyl-  
4-piperidols. V. N. Gulyaev, L. I. Kudryavtseva and G. A.  
Bulichenko (Inst. Fine Chem. Technol., Moscow); Zavod  
Osnosch I, 1967, 27, 53-57 (1967); cf. C.A. 61, 20451, 04093.  
— To 35 g.  $\alpha$ -isomer of 2,5-dimethyl-4-piperidol, in 97.8° (cf.  
C.A. 49, 8956a), in EtOH was added 10.6 g.  $\text{ClCH}_2\text{CO}_2\text{Et}$  and after 1 day at room temp. the mixt. was kept 3 hrs. at  
80-90° yielding 64% 1-(*tert*-butylcarbonylmethyl)-2,5-dimethyl-4-piperidol, m. 96-97° (*picrate*, m. 151-2°; *HCl salt*, m. 131-2°);  
the same product, m. 95-6°, formed on hydrogenation of  
1-carbethoxymethyl-2,5-dimethyl-4-piperidone over Raney  
Ni. The piperidol with  $\text{Ac}_2\text{O}$  present with dry  $\text{HCl}$ , gave  
in 5 hrs. at 100° 98% *acetate HCl salt*, m. 165.5-6.5° (from  
EtOH-Et<sub>2</sub>O), also formed as the *sulfate*, m. 226-7°, in 60%  
yield on heating the piperidol with  $\text{Ac}_2\text{O}$  and a little  $\text{H}_2\text{SO}_4$ ,  
3 hrs. Similarly was prep'd. the *propionate HCl salt*, m.  
146-7°, and the *benzoate HCl salt*, m. 180-7°, whose anes-  
thesizing ability compared with that of Novocaine. Keep-  
ing 20 g. 2,5-dimethyl-4-piperidol and 13.8 g.  $\text{MeCH}_2\text{BrCO}_2\text{Et}$   
in  $\text{Me}_2\text{CO}$  1 day, followed by refluxing 18 hrs. gave 63%  
1-(*tert*-butylcarbonyl)-2,5-dimethyl-4-piperidol, b.p. 129-32°  
 $n_D^{20}$  1.4701 (*HCl salt*, m. 169-70°); this heated with  $\text{BaCl}_2$   
gave 1-(*tert*-butylcarbonylmethyl)-2,5-dimethyl-4-piperidol *benzoate-HCl*, m. 193.5-4° (from EtOH); reaction of the piperidol  
with  $(\text{EtCO})_2\text{O}$  similarly gave the *propionate*, b.p. 135-7°  
(*HCl salt* could not be crystd.). Similarly, 24 hrs. heating  
of 35 g. 2,5-dimethyl-4-piperidol in  $\text{Me}_2\text{CO}$  with 27 g.  $\text{Et}-$   
 $\text{CH}_2\text{CO}_2\text{Et}$ , nspg. the ppkd.  $\text{HBr}$  salt of starting ma-  
terial, and heating the filtrate 12 hrs. longer gave 64% 1-(*tert*-  
butylcarbonylmethyl)-2,5-dimethyl-4-piperidol, b.p. 138-40°,  $n_D^{20}$   
1.4705 (*HCl salt*, m.p. 185-191°), which with  $\text{BaCl}_2$   
gave the *benzoate*, b.p. 185-191°. Heating 29 g. 2,5-dimethyl-  
4-piperidol and 20 g.  $\text{Me}_2\text{CCH}_2\text{CH}_3$  8 hrs. at 110-20° gave  
75% 1-(2-carbonethoxyethyl)-2,5-dimethyl-4-piperidol, b.p. 129-  
6°,  $n_D^{20}$  1.4611, d<sub>4</sub> 1.053 (*HCl salt*, m. 129-32°; *picrate*, m.

NAZAROV, I. N.; KRUGLIKOV, R. I.; BUKHTEVKO, Z. A.

-153-35°), which heated with  $\text{Ac}_2\text{O}$  as above gave the acetate-HCl, m. 101.5-2°, and heated with  $(\text{EtCO})_2\text{O}$  gave the propionate-HCl, m. 131.5-2°; treatment with  $\text{BzCl}$  gave the benzate-HCl, m. 193.5-4° (from EtOH). None of the esters showed physiol. activity except the one cited above. L. Synthetic analgesic substances 13. Action of primary amines on  $\alpha,\beta$ -dimethylvinylketone and 1-methoxy-5-methyl-4-hexen-3-one<sup>1</sup>. Esters of 1,2,3-trimethyl-4-phenyl-5-piperidone<sup>1</sup>. I. N. Nazarov and S. M. Grigor'eva<sup>2</sup> 94-100-- Stirring 1.5 g Me<sub>2</sub>Si(OH)C<sub>2</sub>H<sub>5</sub>CH<sub>2</sub> in 2 portions of 35 g HgSO<sub>4</sub> gave after washing with aq K<sub>2</sub>CO<sub>3</sub> 90% 1-methoxy-5-methyl-4-hexen-3-one, b.p. 76-9°,  $\eta_D^{25}$  1.4355, which heated with  $\beta\text{-MeC}_6\text{H}_5\text{SO}_3\text{H}$  gave  $\beta\text{-MeC}_6\text{H}_5\text{COCH}_2\text{CH}_2$  (I), b.p. 54°,  $\eta_D^{25}$  1.4874. 1 (1.5 g) added gradually to 10 g iso-PrNH<sub>2</sub>, contg. 3 drops H<sub>2</sub>O, at 60° or lower, followed by standing 20 min., gave 70% 1-isopropylamino-5-methyl-4-hexen-3-one, b.p. 68-9°,  $\eta_D^{25}$  1.4659, d<sub>4</sub><sup>20</sup> 0.9015 [HCl salt, m. 123-9° (from Me<sub>2</sub>CO)]; a 31% yield was obtained on heating I with 65% aq. iso-PrNH<sub>2</sub> 8 hrs. at 60-6°. Hydrogenation over Raney Ni in EtOH gave 1-isopropylamino-5-methyl-3-hexanone, b.p. 52°,  $\eta_D^{25}$  1.4365, d<sub>4</sub><sup>20</sup> 0.8868 [HCl salt, m. 85-6° (from Me<sub>2</sub>CO)], which, formed in 12 g, yield on addg. 9 g iso-PrNH<sub>2</sub> at below 50° to 16 g iso-BuCOCH<sub>2</sub>CH<sub>2</sub> and heating 1 hr. at 55°, passing 5 g gaseous Me<sub>2</sub>NH into 22 g I at 20° and keeping 2 hrs., gave 5 g 1,3,2-trimethyl-4-piperidone, b.p. 52-3°,  $\eta_D^{25}$  1.4088, d<sub>4</sub><sup>20</sup> 0.9582 (picrate, m. 160°, with decom.), along with 10 g higher boiling products. Addn. of 20 g 25% aq. MeNH<sub>2</sub> in 15 min. to 21.3 g 1-methoxy-5-methyl-4-hexen-3-one, followed by 1.5 hrs. at room temp., acidification with aq. HCl, extra, of neutral products with Et<sub>2</sub>O, and treatment of the aq. layer with K<sub>2</sub>CO<sub>3</sub> gave an oil which was taken up in Et<sub>2</sub>O, the latter removed in *vacuo* at 20° and the residue kept under vacuum 3 hrs. gave

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compd. The compd. distd. at 0.03 mm. gave a few mg. oil, b.p. 100° (probably a-pyrididone), 25 mg. viscous oily quinolizidine-7,9-dicarboxylic ester, b.p. 110-30°, and 0.3 g. unidenobutyric acid ester,  $\text{Et}_2\text{O}(\text{CH}_2)_5\text{NHOCR}(\text{R} = 1\text{-carboxy-5-quinolizidinyl})$  (III), m. 154° (from  $\text{Me}_2\text{CO}$ ). III (0.189 g.) heated 40 hrs. with 10 ml. concd. HCl in a bomb-tube, the soln. evapd. *in vacuo*, the residue taken up in 10 ml. abs. Et<sub>2</sub>O, isolated as above, and the residue fractionally distd. yielded 17 mg. oily mixt. of  $\text{NH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CO}_2\text{Et}$  and  $\alpha$ -pyrididone, b.p. 80-120°, 50 mg. III, b.p. 120°, and 49 mg. III, b.p. 100°.

C. R. Addinall  
 Heterocyclic compounds. XLIX. Synthetic analgesic substances. II. Esters of 1-carboxyalkyl-2,5-dimethyl-4-piperidols. I. N. Nazarov, R. I. Kruglikova, and L. A. Bukhtenko (Inst. Fine Chem. Technol., Moscow). *Zhur. Obshch. Khim.* 27, 88-93 (1957); cf. *C.A.* 51, 8090; 66689. — To 38 g.  $\alpha$ -isomer of 2,5-dimethyl-4-piperidol, m. 97-8° (cf. *C.A.* 49, 8966a), in EtOH was added 16.0 g.  $\text{ClCH}_2\text{CO}_2\text{Et}$  and after 1 day at room temp. the mixt. was kept 3 hrs. at 80-90° yielding 64% 1-(carbethoxymethyl)-2,5-dimethyl-4-piperidol, m. 95-6° (*picrate*, m. 161-2°); *HCl salt*, m. 131-2°; the same product, m. 95-6°, formed on hydrogenation of 1-carbethoxymethyl-2,5-dimethyl-4-piperidone over Raney Ni. The piperidol with  $\text{Ac}_2\text{O}$  presskd. with dry HCl, gave in 5 hrs. at 100° 98% *acetyl HCl salt*, m. 165.5-6.5° (from EtOH- $\text{Et}_2\text{O}$ ), also formed as the *sulfate*, m. 220-7°, in 50% yield on heating the piperidol with  $\text{At}_2\text{O}$  and a little  $\text{H}_2\text{SO}_4$  8 hrs. Similarly was prep'd. the *propionate HCl salt*, m. 146-7°, and the *benzoate HCl salt*, m. 166-7°, whose anesthetizing ability compared with that of Novocaine. Keeping 20 g. 2,5-dimethyl-4-piperidol and 13.8 g.  $\text{MeCH}_2\text{BrCO}_2\text{Et}$  in  $\text{Me}_2\text{CO}$  1 day, followed by refluxing 18 hrs., gave 63% 1-(1-carboxyethyl)-2,5-dimethyl-4-piperidol, b.p. 129-32°, n<sub>D</sub><sup>20</sup> 1.4761 (*HCl salt*, m. 169-70°); this heated with  $\text{BzCl}$

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NAZAROV, I. N.; KRUGLJAKOV, R. I.; BUKHTENKO, L. A.

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gave *I*-(*1*-*t*-*butylcarbonyl*)-*2,5-dimethyl-4-piperidol*-*benzoate-HCl*, m. 193.5-4° (from EtOH); reaction of the piperidol with  $(\text{EtCO})_2\text{O}$  similarly gave the *propionate*, b.p. 195-7° (*HCl salt* could not be crystallized). Similarly, 24 hrs heating of 33 g. *2,5-dimethyl-4-piperidol* in  $\text{Me}_2\text{CO}$  with 27 g.  $\text{BrCH}_2\text{CO}_2\text{Et}$ , sepg. the ptd.  $\text{HBr}$  salt of starting material, and heating the filtrate 12 hrs, longer gave 54% *I*-(*1-t-butylcarbonyl*)-*2,5-dimethyl-4-piperidol*, b.p. 138-40°,  $n_D^{20}$  1.4793 (*HCl salt*, uncryatilizing oil), which with  $\text{BrCl}$  gave the *benzoate*, b.p. 185-90°. Heating 23 g. *2,5-dimethyl-4-piperidol* and 26 g.  $\text{MeO}_2\text{CCH}_2\text{CH}_2$  8 hrs. at 110-20° gave 75% *I*-(*2-carbomethoxyethyl*)-*2,5-dimethyl-4-piperidol*, b.p. 122-6°,  $n_D^{20}$  1.4611, d<sub>4</sub><sup>20</sup> 1.053 (*HCl salt*, m. 129-32°, *picrate*, m. 153-3.5°), which heated with  $\text{Ac}_2\text{O}$  as above gave the *acetate-HCl*, m. 161.5-2°, and heated with  $(\text{EtCO})_2\text{O}$  gave the *propionate-HCl*, m. 191.5-2°; treatment with  $\text{BrCl}$  gave the *benzoate-HCl*, m. 193.5-4° (from EtOH). None of the esters showed physiol. activity except the one cited above. L. Synthetic analogs substances. 13. Action of primary amines on  $\beta,\beta$ -dimethylidenehydronaphthalene and 1-methoxy-5-methyl-4-hexen-3-one. Esters of 1,2,2-trimethyl-4-phenyl-4-piperidol. I. N. Nazarov and S. M. Makina. *Ibid.* 94-100.—Shring 1.5 l.  $\text{MeOH}$ , 40 g.  $\text{HgSO}_4$ , and 2 kg.  $\text{Mn}(\text{OH})_2\text{CCl}_3\text{CH}_2$  18 hrs. at 38-40° with addition in 2 portions of 36 g.  $\text{HgSO}_4$  gave after washing with  $\text{K}_2\text{CO}_3$  90% *I*-*anisyl-6-methyl-4-ketene-3-one*, b.p. 76-9°,  $n_D^{20}$  1.4555, which heated with *p*- $\text{McC}_6\text{H}_4\text{SO}_3\text{Na}$  gave  $\text{Mn-C(=CH}_2\text{CO}_2\text{CH}_2\text{)(I)}$ , b.p. 54°,  $n_D^{20}$  1.4600. 1 (19.4 g.) added gradually to 10 g.  $\text{iPr}_2\text{NH}$ , contg. 2 drops  $\text{H}_2\text{O}$ , at 60° or lower, followed by standing 20 min., gave 76% *I*-*anisylaminoo-5-methyl-4-ketene-3-one*, b.p. 98-0°,  $n_D^{20}$  1.4650, d<sub>4</sub><sup>20</sup> 0.9016 (*HCl salt*, m. 128-0° (from  $\text{Me}_2\text{CO}$ )).

NAZAROV, I. N.; TIKHONOV, V. T.; BUKHTENKO, L. A.

HCl salt, m. 201.5-2°; II 3-bromopropionate-HCl, m. 160.5-70°; II 3-chloropropionate-HCl, m. 178-9°; II acrylate, b.p. 128-30° (HCl salt, m. 215-16°), which hydrogenated to the propionate, whose HCl salt m. 221-2°; II methacrylate, b.p. 120-2° (HCl salt, m. 231-2°), which hydrogenated to the crotonylate, whose HCl salt m. 207-8°. II and crotonoyl chloride gave II nicotinate-HCl, m. 103-5°, free es., m. 106-7.5°. Similarly was prep. II isonicotinate, m. 134-5°. Only acrylate and methacrylate showed anal-

gesic activity (35-50% of that shown by Pronadol).

O. M. Kosarov

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MT

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5 (3)

AUTHORS: Grinev, A. N., Bukhtenko, L. A., Terent'yev, A. P. SOV/79-29-3-40/61

TITLE: Investigations in the Field of Quinones (Issledovaniya v oblasti khinonov). XXVI. Condensation of n-Quinones With Furoyl Acetate, Acetyl Acetone, and Dibenzoyl Methane (XXVI. Kondensatsiya n-khinonov a furoiluksusnym efirom, atsetilatsetonom i dibenzoilmetanom)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 945-949 (USSR)

ABSTRACT: Continuing earlier papers (Refs 1-13) the present paper describes the reaction of n-benzoquinone and  $\alpha$ -naphthoquinone with furoyl acetate, acetyl acetone, and dibenzoyl methane. The condensation of n-benzoquinone and  $\alpha$ -naphthoquinone with furoyl acetate leads to compound (I), to a derivative of benzodifurane and to compound (II). The formulas (III) and (IV) are suggested for the structure of the derivative of benzodifurane. In reacting n-benzoquinone and  $\alpha$ -naphthoquinone with acetyl acetone in the presence of zinc chloride the conditions were found, under which compounds (V) and (VII) are formed in yields of 60-65 %. The relatively high yields of these compounds can be obtained only by the gradual addition of the quinones into

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## Investigations in the Field of Quinones.

XXVI. Condensation of n-Quinones With Furoyl Acetate, Acetyl Acetone, and  
Dibenzoyl Methane

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the reaction mass, as the redox side processes are eliminated in this way. Compound (VIII) was synthesized by the condensation of 2,3-dichloro-n-benzoquinone with the imine of acetyl acetone (90 % yield), which fact points to still another possible method. The reaction of  $\alpha$ -naphthoquinone with dibenzoyl methane led to unexpected results. The resulting chief product was the adduct (IX), besides small amounts of compound (X). On the methylation of (IX) with dimethyl sulphate in alkaline medium, compound (XI) is obtained. There are 19 references, 13 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)  
SUBMITTED: January 27, 1958

Card 2/2

~~BUKHTER, Ye., inzh.; TSYRLIN, B., inzh.~~

Principal trends in the development of centrifugal refrigeration compressors. Khol. tekhn. 35 no. 3:23-28 My-Je '58. (MIRA 11:7)

1. Tsentral'noye konstruktorskoye byuro kholodil'nogo mashinostroyeniya (for Bukhter). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Tsyrlin).  
(Compressors)

RIZHKOY, Ye.V.; BUKHTERIN, A.Ya.; DYMOWICH, N.D.; IVANOV, N.I.; MARKOV, Yu.V.

Automatic panoramic ionosphere station. Izv. vys. ucheb. zav.;  
radiotekh. 2 no.2:227-233 Mr-dp '59.  
(MIRA 12:?)

1. Rekonstruktsiya kafedrey antenn i rasprostraneniya radiovoln  
Leningradskogo elektrotekhnicheskogo instituta svyazi im. M.A.  
Bench-Bruyevicha.  
(Radio stations) (Ionospheric radio wave propagation)

AUTHORS: Bydin, Yu. F., Lukhteyev, A. M. 20-119-6-21/56

TITLE: Ionization of Fast Neutral Potassium Atoms on Collision With Argon Atoms and With Molecules of Hydrogen, Nitrogen and Oxygen (Ionizatsiya bystrykh neytral'nykh atomov kaliya pri stolknoveniyakh s atomami argona i molekulami vodoroda, azota i kisloroda)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 119, Nr 6, pp. 1131-1133 (USSR)

ABSTRACT: The potassium atoms mentioned in the title possess energies of from 100 to 2000 eV. The ionization potentials of the employed gases are considerably higher than the ionization potential of potassium. Therefore the ionization of the potassium atoms according to the scheme  $K + A \rightarrow K^+ + e + A$  is probably predominant. The observation of the effect was conducted by the recording of the fast positive ions  $K^+$ . The scheme of the experimental device is visualized by a figure. The beam of positive potassium

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**Ionization of Fast Neutral Potassium Atoms on:  
Collision with Argon Atoms and With Molecules of  
Hydrogen, Nitrogen and Oxygen.**

20-119-6-21/56

ions issuing from a thermionic source is focussed by a system of electrodes and then collimated by two slits. The following gases were used for a filling of the chamber in order to obtain collisions: spectrally pure argon, purified hydrogen and purified technical nitrogen. The results of the measurements are visualized by a diagram. This diagram shows the dependence of the cross section  $\sigma$  upon the energy  $T$  and the velocity  $v$  of the fast atoms. The ionization cross sections of the fast potassium atoms amount to from  $10^{-15}$  to  $10^{-17} \text{ cm}^2$  in the energy range of from 100 to 2000 eV, they increase at an increase of  $T$ . The magnitude of the effect increases at a transition from argon to the molecular gases and within the molecular gases at the transition from hydrogen to the heavier gases. Finally the authors express their gratitude to Professor V. M. Dukel'skiy for providing the theme and for valuable suggestions during the performance of this work. There are 2 figures and 2 references, 1 of which is Soviet.

Card 2/3

Ionization of Fast Neutral Potassium Atoms on  
Collision With Argon Atoms and With Molecules of  
Hydrogen, Nitrogen and Oxygen

20-119-6-21/56

ASSOCIATION: Fiziko-tehnicheskiy institut Akademii nauk SSSR  
(Institute of Physics and Technology, AS USSR)

PRESENTED: January 24, 1958, by L. A. Artsimovich, Member, Academy of  
Sciences, USSR

SUBMITTED: January 23, 1958

Card 3/3

BYDIN, Yu.F.; BUKHTEYEV, A.M.

Resonance exchange of positive potassium ions. Zhur.tekh.fiz. 29  
no.1:12-14 Ja '59. (MIR 12:4)

1. Leningradskiy fiziko-tehnicheskiy institut AN SSSR.  
(Potassium) (Ion beams)

24.6100

02831  
S/048/60/024/008/008/017  
B012/B067AUTHORS: Bukhteyev, A. M., Bydin, Yu. F.TITLE: Resonance Charge Exchange of Ions and Atoms of the Alkali MetalsPERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,  
Vol. 24, No. 8, pp. 964-969

TEXT: O. B. Firsov (Ref. 1) theoretically determined the cross sections of resonance charge exchange for elements with an S-state as ground state of the atom and ion. The authors have already measured (Ref. 2) the cross section of resonance charge exchange in potassium. In the present paper these cross sections were measured for Cs, Rb, K, and Na in the range of from 150 to 2100 ev. The measurements were made by the method of the extraction of positive ions which are formed in the charge exchange in the chamber filled with alkali metal vapors. Since the literature data on Cs, Rb and Na vapor pressures show strong divergencies, an indirect method was used to determine the cross sections

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Resonance Charge Exchange of Ions and Atoms  
of the Alkali Metals

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B012/B067

of resonance charge exchange in ions of these metals; for this purpose the results obtained for potassium were used. Experimental arrangement and measurement method are described. Fig. 1 shows the scheme of the arrangement and Fig. 2 the charge exchange chamber. The positive alkali ions were obtained from a thermionic source which consisted of a nickel plate to which an aluminum silicate mixture produced according to M. A. Yeremeyev was applied. Since the reliability of the cross section measurements in other alkali metals according to the method applied for potassium was doubted, the cross sections of Cs, Rb, K, and Na were directly compared by measuring the vapor pressure of these metals from their surface ionization in oxidized tungsten. The results of measurements are given in the form of a diagram: the cross sections Q of the resonance charge exchange as functions of the ion velocity v for Cs, Rb (Fig. 3, curves 1 and 4) and K and Na (Fig. 4, curves 4 and 1). These Figs. also show the theoretical curves. Curves 3 and 6 are calculated from the formulas of O. B. Firsov, curves 2 and 5 from the formulas of Yu. N. Demkov. Curves 7 on both Figs. were drawn according to experimental data from the paper by R. M. Kushnir (Ref. 8) for resonance

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Resonance Charge Exchange of Ions and Atoms  
of the Alkali Metals

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B012/B067

X

charge exchange of  $\text{Cs}^+$  (Fig. 3) and  $\text{K}^+$  (Fig. 4). The results obtained here and their comparison with the theoretical and experimental data show that in the entire velocity range considered the cross sections  $Q$  of the various alkali metals differ only slightly at the same velocity. With all alkali metals  $Q$  monotonically decreases with rising velocity. Theory and experiment are in sufficient agreement. V. M. Dukel'skiy advised the authors. There are 4 figures and 8 references: 5 Soviet and 3 British.

ASSOCIATION: Fiziko-tehnicheskiy institut Akademii nauk SSSR  
(Physicotechnical Institute of the Academy of Sciences  
USSR)

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81683

S/057/60/030/05/12/014  
B012/B056*24.2500  
5.2200(E)*AUTHORS: Bydin, Yu. F., Bukhteyev, A. M.TITLE: Ionization of Fast Na-, K-, Rb-, and Cs-Atoms in Collisions  
With H<sub>2</sub>-, D<sub>2</sub>-, N<sub>2</sub>-, and O<sub>2</sub>-MoleculesPERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 5,  
pp. 546 - 554

TEXT: The present paper was read at the Vsesoyuznaya konferentsiya po elektronnym i atomnym stolknoveniyam (All-Union Conference on Collisions of Electrons and Atoms) at Riga, which was held from June 26, to July 3, 1959, where the ionization of fast atoms of alkali metals in single collisions with H<sub>2</sub>-, D<sub>2</sub>-, N<sub>2</sub>-, and O<sub>2</sub>-molecules was investigated, the energy of the fast atoms amounting to from 150 to 2,200 ev. The reason was given why alkali metals and the gases mentioned were used for this investigation. The fast atoms were obtained by resonance recharge. Fig. 1 shows the scheme of the experimental device, which is described. The measurements were carried out for the purpose of obtaining the initial data in order to be able to determine the full cross sections in the

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Ionization of Fast Na-, K-, Rb-, and Cs-Atoms in S/057/60/030/05/12/014  
Collisions With H<sub>2</sub>-, D<sub>2</sub>-, N<sub>2</sub>-, and O<sub>2</sub>-Molecules B012/B056

ionization of fast atoms in single collisions with the gas molecules. The measuring method used is described. Measurements were carried out of the full cross sections Q of the ionization of the fast atoms Na, K, Rb, and Cs in H<sub>2</sub>, D<sub>2</sub>, N<sub>2</sub>, and O<sub>2</sub> within the range of from 150 - 2,200 ev. The results hereby obtained are shown in form of diagrams in Figs. 3, 4, and 5. They show the dependence of Q on the velocity v of the fast atoms. The following energy thresholds in the ionization were observed: Cs, H<sub>2</sub> (740 ev); Cs, D<sub>2</sub> (360 ev); Rb, H<sub>2</sub> (490 ev); Rb, D<sub>2</sub> (280 ev) (Table).

The results obtained are discussed from the viewpoint of the "quasi-adiabatic hypothesis" by Messia and the conception of the "intersection" of the potential curves corresponding to the initial- and final states in a system consisting of two particles slowly approaching each other. The cross sections obtained are compared with the data known from the observations of meteoric ionization. Professor V. M. Dukel'skiy advised the authors. There are 6 figures, 1 table, and 11 references: 5 Soviet, 5 English, and 1 German.

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X

**Ionization of Fast Na-, K-, Rb-, and Cs-Atoms in S/057/60/030/05/12/014  
Collisions With H<sub>2</sub>-, D<sub>2</sub>-, N<sub>2</sub>-, and O<sub>2</sub>-Molecules B012/B056**

**ASSOCIATION: Fiziko-tehnicheskiy institut AN SSSR Leningrad (Institute of  
Physics and Technology of the AS USSR, Leningrad)**

**SUBMITTED: October 19, 1959**

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**Card 3/3**

BUKHTEYEV, A.M.; BYDIN, Yu.F.; DUKEL'SKIY, V.M.

Electron capture by O<sub>2</sub> and Cl<sub>2</sub> molecules in collisions with fast atoms of alkali and metals. Zhur. tekhn. fiz. 31 no.6:688-693 Je '61.

(MIRA 14:7)

1. Fiziko-tehnicheskiy institut imeni A.F. Ioffe AN SSSR, Leningrad.  
(Electrons--Capture) (Alkali metals) (Collisions (Nuclear physics))

BUKHTEYEV, A.M.; BYDIN, Yu.F.

Loss of an electron by fast Ca, Mg, Si, and Fe atoms in collisions  
with N<sub>2</sub> and O<sub>2</sub> molecules. Izv. AN SSSR. Ser. fiz. 27 no.8:1009-  
1011 Ag '63. (MIRA 16:10)

1. Fiziko-tehnicheskiy institut AN SSSR im. A.F.Ioffe.

~~BUKHTEYEV, Pavel Ivanovich; KONDRAZHOV, Vsevolod Aleksandrovich;~~  
~~SIMDYUKOV, S.I., nauchnyy red.; SHAURAK, Ye.N., red.: KRASTOVA,~~  
~~N.V., tekhn.red.~~

[Marine engine control] Regulirovanie sudovykh energeticheskikh  
ustanovok. Leningrad, Gos.sciuznnoe izd-vo sudostroit.promyshl.,  
(MIRA 12:12)  
1959. 262 p.  
(Marine engines) (Automatic control)

NIKOLAYEV, Vladimir Ivanovich; KOLESNIKOV, N.V., retsenzent;  
BUKHTEYEV, P.I., nauchn. red.; ROZENGAUZ, N.M., red.

[Control of marine power plant installations] Kontrol'  
raboty sudovykh energeticheskikh ustanovok. Leningrad,  
Sudostroenie. Pt.1. 1965. 239 p. (MIRA 18:5)

GUMEROV, R.Kh.; BUKHTEYEV, P.P.; SPIVAK, A.I.; IL'IN, N.G.

Analyzing methods for using drilling lines whose length is  
greater than that of the line string-up in enterprises of  
the Tuymazy Oil Well Drilling Trust. Burenje no.2:35-37 '65.  
(MIRA 18:5)

1. Trest "Tuymazaburneft" i Ufimskiy neftyanoy institut.

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHTEYEV, S. F. and KAPNIK, G. M.

"Biochemical Changes in Relapsing Fever According to the Course  
of the Disease," Terap. Arkhiv., No.4, 1949

Chair of Infectious Diseases, 1st Moscow Med. Inst.

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

SOV/49-59-10-13/19

AUTHORS: Bukhteyev, V. G., and Andreyev, T. A.

TITLE: On Generation of Storm Microseisms

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya  
1959, Nr 10, pp 1510-1512 (USSR)

ABSTRACT: An analysis of microseisms recorded by the Far East seismic stations during 1954 to 1957 is described. The data were collected by the Sachalin Institute of Scientific Research, Academy of Sciences USSR. The results are illustrated by the graphs which give the following: Fig 1 - the variations of amplitudes and periods during microseismic storms recorded by different stations, Fig 2 - distribution of microseismic periods (1 - beginning of the storm, 2 - increase of amplitude, 3 - height of the storm), Fig 3 - amplitude of microseisms in Kurilsk 1 and the height of the sea waves near the shore 2, Fig 4 - synoptic situation during which the microseisms illustrated in Fig 5 occurred. Table 1 shows the repetition of the microseismic periods in storm seasons in the autumn

Card 1/2

On Generation of Storm Microseisms

SOV/49-59-10-13/19

and winter. There are 5 figures, 1 table and 2  
Soviet references.

ASSOCIATION: Akademiya nauk SSSR Sibirskoye otdeleniye  
(Academy of Sciences USSR, Siberian Branch)

SUBMITTED: August 11, 1958



Card 2/2

S/169/62/000/007/010/149  
D228/D307

AUTHOR: Bukhteyev, V. G.

TITLE: Comments concerning the stimulation of microseisms by sea waves

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 7, 1962, 13, abstract 7A91 (Tr. Sakhalinsk. kompleksn. n.-i. in-ta, no. 10, 1961, 174-177)

TEXT: The question of the possibility of stationary wave formation on the sea's surface in a gale is discussed. Since in a cyclone there is almost always interference from the swell, conditions are available for the formation of stationary waves that stimulate microseisms. / Abstracter's note: Complete translation. /

Card 1/1

BUKHTEYEV, V.G.

Determination of the length of an internal tidal wave by climatic  
relations. Okeanologiya 3 no.5:824-828 '63. (MIRA 16:11)

1. Gidrometeorologicheskiy institut, Leningrad.

AL'TSHULER, V.M., kand. geogr. nauk; ANTROPOVA, L.V., st. inzh.;  
BUKHTEYEV, V.G., st. inzh.; VOLODINA, Z.G., ml. nauchn.  
sotr.; RZHONSNITSKIY, V.B., kand. geogr. nauk; SELITSKAYA,  
Ye.S., kand. geogr. nauk; FUKS, V.R., kand. geogr. nauk;  
BREKHOVSKIKH, Yu.P., red.; TIMONOV, V.V., red.

[Study of tidal phenomena in a heterogeneous sea] Issledo-  
vanie prilivnykh iavlenii v neodnorodnom more. Leningrad,  
Gidrometeoizdat, 1965. 183 p. (MIRA 18:8)

1. Leningradskoye otdeleniye Gosudarstvennogo okeanografi-  
cheskogo instituta (for Al'tshuler).
2. Murmanskoye uprav-  
leniye gidrometeorologicheskoy sluzhby (for Antropova).
3. Leningradskiy gidrometeorologicheskiy institut (for  
Bukhteyev).
4. Gosudarstvennyy okeanograficheskiy institut  
(for Volodina, Selitskaya).
5. Leningradskiy gosudarstven-  
nyy universitet imeni A.A. Zhdanova (for Rzhonsnitskiy,  
Fuks).

BUKHTEYEV, V.G.

Necessity of calculating the Doppler effect in the analysis of  
observations on internal waves. Okeanologiya 4 no.6:994-996 '64.  
(MIRA 18:2)

L. Leningradskiy gidrometeorologicheskiy institut.

COUNTRY	:	USSR
CATEGORY	:	Meadow Cultivation.
ARS. JOUR.	:	RZhBiol., No. 3, 1959, No. 10819
AUTHOR	:	Bukhtseyeva, A. Y.
INST.	:	The Scientific Research Institute of the Agriculture*)
TITLE	:	On the Problem of the Dynamics of the Meadows As Affected by Hay Mowing.
ORIG. PUB.	:	Byul. nauchno-tekhn. inform. N.-i. in-t s.kh. Krayn. Svera, 1957, No. 2, 28-29.
ABSTRACT	:	The nature of the changes in the meadow vegetation of Yenisei flood plain occurring under the influence of systematic mowings was studied. On the elevated sections of the flood plain, the change in the grass stand proceeds in the following direction: reed bentgrass meadow - chervil meadow - bromegrass meadow - foxtail meadow - catkin meadow. -- B. K. Flerov.
CARD: 1/1		
*) of the Extreme North.		

BUKHTEYN, A. V.

Dottedland meadows of the Turukhansk area in the Yenisey Valley.  
Izv. vost. fil. AN SSSR no. 6:128-137 '57. (MIRA 10:9)

I. Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut  
Akademii nauk SSSR.  
(Turukhansk District--Pastures and meadows)

LOPATIN, V.D.; BUKHTEYEVA, A.V.

Characteristics of vegetation zones on the island of Sakhalin.  
Izv. Sib. otd. AN SSSR no.10:103-111 '59. (MIRA 13:4)

1. Sakhalinskiy kompleksnyy nauchno-issledovatel'skiy institut  
Sibirskogo otdeleniya AN SSSR.  
(Sakhalin--Phytogeography)

BUKHTEYeva, A.V.

*Primula sachalinensis* Nakai, the primrose of Maguntan Volcano.  
Bot. zhur. 45 no.5:746-748 My '60. (MIRA 13:7)

1. Sakhalinsky kompleksnyy nauchno-issledovatel'skiy institut  
Sibirekogo otdeleniya Akademii nauk SSSR, gorod Novo-Aleksan-  
drovsk na Sakhaline.  
(Maguntan, Mount--Primoroses)

BUKHTEYEVA, A.V.

Forest typology of Sakhalin. Trudy Sakh. kompl. nauch.-issl.  
inst. AN SSSR no. 9:54-63 '60. (MIRA 14:4)  
(Sakhalin—Forests and forestry)

LOPATIN, V.D.; BUKHTSEYVA, A.V.

Ecological and phytocoenotical series of forests in Sakhalin.  
Trudy Sakh. kompl. nauch.-iaisl. inst. AN SSSR no. 9:64-67 '60.

(MIRA 14:4)

(Sakhalin--Forests and forestry)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHTEYeva, A. V.

Distribution of firs in Sakhalin. Bot. zhur. 48 no. 3:449-450  
Mr '63. (MIRA 16:4)

(Sakhalin—Fir)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHTEYEVA, A.V.

Successions in the spruce-fir forests of Sakhalin. Vest. LGU  
19 no.21:145-148 '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

BUKHTEYEVA, N. F.

BUKHTEYEVA, N. F.: "Vascular reflexes in endarteritis obliterans".  
Moscow, 1955. First Moscow Order of Lenin Medical Inst.  
(Dissertations for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

BEGEL'MAN, A.A., dotsent; BOGDANOVA, E.A.; BUKHTEYEVA, N.F.

Diagnosis and treatment of obliterative peripheral vascular diseases. Khirurgiia 40 no.4:140-145 Ap '64 (LIRA 18:1)

1. Fakul'tetskaya khirurgicheskaya klinika (zav. - prof. N.N. Yelanskii) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

YELANSKIY, N.N. [deceased]; BUKHTEYEVA, N.F.; NIKOLAYEV, A.V.

Treatment of thrombophlebitis of the lower extremities. Khirurgiia  
40 no.11;9-15 N '65. (MIRA 18:7)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. N.N.Yelanskiy  
[deceased]) I Moskovskogo ordena Lenina meditsinskogo instituta imeni  
Sechenova.

Y E, M, BUKHTEYEVA

"Examination of the Feasibility of Developing Ceramic Tubes of 'Stacked' Construction" from Annotations of Works Completed in 1955 at the State Union Sci. Res. Inst; Min. of Radio Engineering Ind.

So: B-3,080,964

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8

BUKHTIAROV, O. A., Cand of MedhSci -- (diss) "Bursitis of the knee, its treatment and prophylaxis." Khar'kov, 1957, 14 pp (Khar'kov Medical Institute), 200 copies (KL, 31-57, 105)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000307410008-8"

BUKHTIAROV, O.A.

BUKHTIAROV, O.A.

Bursitis of tibial stumps caused by prostheses. Ortop. travm. i  
protek. 18 no.3:36-39 Ky-Je '57. (MIRA 10:9)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta protexiro-  
vaniya (dir. - prof. A.P.Kotov)  
(ARTIFICIAL LIMB, compl.  
bursitis of tibia)  
(TIBIA, dia.  
bursitis of amputated stump caused by artif. limb.)

BOGDANOV, F.R.; BUKHTIAROV, O.A.; NOVACHENKO, N.P.; REVENKO, T.A.

Prospects of rehabilitation therapy and prosthesis in the Ukraine  
in the light of resolutions of the 21st Congress of the CPSU.  
Ortop.travm.i protez. 21 no.5:62-65 My '60. (MIRA 13:9)  
(ORTHOPEDICS) (PROSTHESIS)

L 21098-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 AFETR/IJP(c) JD/WW/JG

ACCESSION NR: AP4049101

S/0075/64/019/011/1411/102

AUTHOR: Ryabchikov, D.I., Bukhtiarov, V.Ye.

TITLE: Determination of zirconium and hafnium in each other's presence in molybdenum-based alloys by ion exchange chromatography

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no. 11, 1964, 1411-1412

TOPIC TAGS: Ion exchange chromatography, zirconium determination, molybdenum-based alloy, hafnium determination, complexometric analysis

ABSTRACT: The preparation of the test solution from the alloy is described. This solution (in 0.5 M HCl) is forced through a KU-2 ion exchange column. Zirconium is extracted from the column with 0.024 M citric acid in 1-M HCl, the hafnium subsequently with 0.3 M oxalic acid. The elements are then determined quantitatively by chelation with EDTA in the presence of xylan orange, after the citric and oxalic acids have been decomposed with potassium permanganate. The results were tabulated and found to be sufficiently accurate.  
Orig. art. has: 1 table.

Card 1/2

L 21098-65

ACCESSION NR: AP4049101

ASSOCIATION: None

SUBMITTED: 21 Nov 63

ENCL: 00

SUB CODE: MM, IC

NO REF SOV: 03

OTHER: 002

Card 2/2

BUKHTILOV, F. N.

"Tuberculosis of Cattle and Measures for Its Control in Minskaya Oblast (1946-1952)." Cand Vet Sci, Moscow Technological Inst of the Meat and Milk Industry, Moscow, 1953. (RZhBiol, No 5, Mar 55)

SO: Sum. No. 670, 29 Sep 55—Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

BUKHTILOV, F. N., Aspirant

"Tuberculosis in Cattle and Measures for Combating It." Cand. Sci., Moscow Technological Inst of the Meat and Dairy Industry, 16 Sep 54. (V., 2 Sep 54)

SO: Sum 432, 29 Far 55

BUKHTILOV, F. N.

Bukhtilov, F. N.

"Cattle Tuberculosis and Measures to Combat It in Minsk Oblast  
(1946-1952)." Min Higher Education. Moscow Veterinary Academy,  
Moscow, 1955 (Dissertation for the degree of Candidate in Veteri-  
nary Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

VYSHELESSKIY, S.N., professor; BUKHTILOV, F.N., kandidat veterinarnykh nauk.

Role of the series of measures to control tuberculosis in cattle.  
Veterinariia 33 no.5:21-25 My '56. (MIRA 9:8)

1. Deystvitel'nyy chlen AN BSSR (for Vyshelesskiy); 21. Institut zhivotnovodstva AN BSSR.

(Tuberculosis in animals)  
(Cattle--Diseases and pests)

BUKHTILOV, Fedor Nikoleyevich

[Tuberculosis in farm animals; its prevention and control]  
Tuberkulioz sel'skagaspadarchykh zhyviol, papiaredzhanne i  
barats'ba z im. Minsk, Dziarzh. vyd-va BSSR, 1957. 36 p.  
(MIRA 10:12)  
(Tuberculosis in animals)

LAZAREV, P.S., FEDOROV, A.I., prof.; BUKHTILOV, F.N., dotsent; PAVLOV, P.I.,  
dotsent; ZASLONOV, M.S.; PLEKHANOV, B.P.; Prinimali uchastiye:  
GRIBOVSKIY, G.P., veterinarnyy vrach; RYBAKOVA, A.V., veterinarnyy vrach

Some characteristics of the course of rabies in cattle. Veterinariia  
39 no.9:20-22 S '62. (MIRA 16:10)

1. Troitskiy veterinarnyy institut (for Lazarev, Fedorov, Bukhtilov,  
Pavlov). 2. Direktor Troitskoy mezhsovkhoznoy veterinarno-bakte-  
riologicheskoy laboratorii (for Zaslakov). 3. Glavnnyy veterinarnyy  
vrach Bredinskogo rayona, Chelyabinskoy oblasti (for Plekhanov).

ZIMENKOV, A.P., mayor med.sluzhby, BUKHTIN, G.A., mayor med.sluzhby

Possibility for using ocean-water in cooking aboard ship under  
emergency conditions. Voen.med.zhur. no.12:42-45 D '55 (MIRA 12:1)  
(COOKERY, MARINE)  
(SEA WATER)

14(3) 22(3)

SOV/176-58-7-4/17

AUTHOR: Bukhtin, L., Major General of Engineers

TITLE: A Creative Solution of a Problem (Tvorcheskoye vypolneniye zadachi)

PERIODICAL: Voyenno-inzenernyy zhurnal, 1958, Nr 7, pp 14-15 (USSR)

ABSTRACT: The author states that during one of the training practices, a company commander, Tabanakov, was given a task of constructing 3 metal shelters, 3 X 1.8 m each, with 2 m long passages, and entrances to the shelters perpendicular to an existing trench. One of his platoons was to construct one of the shelters. The platoon was equipped with a bulldozer (cutting blade 3.2 m wide) and a ZIG-151 "run about" crane. The work was to be done during night, and was to be completed 2 hrs before dawn. Two alternative methods (Figures 1 and 2) presented themselves to the commander: either to work bulldozer perpendicularly to the trench or parallel

Card 1/2

SOV/176-58-7-4/17

A Creative Solution of a Problem

to it. He choose the second method as more practical, involving less displacement of earth, less destruction of the existing trench and, a more expeditious. For this work the company commander was commended by the Commander in Chief of the Military District. There are 2 sketches.

Card 2/2

BUKHTIN, L., general-mayor inzhenernykh voysk

Mechanization is the basis of success. Voen. vest. 41 no.9:94-96  
S '61. (MIRA 15:1)  
(Military engineering)

BUKHTIYAROV, A. G.

"O Vnutrivennom i Vnutriarterial'nom Vvedenii Nekotorykh Khimicheskikh Raz-drazhiteley (Concerning the Intravenous and Intra-Arterial Introduction of Some Chemical Irritants)," Naval Medical Academy, Leningrad, 1949